



*Weather*

**WEATHER SUPPORT**

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This instruction establishes responsibilities and weather support procedures pertaining to the 62d Airlift Wing (62 AW) and tenant units at McChord AFB. It provides general information for weather services, including weather observations and forecasts, weather warnings, watches, advisories, dissemination of information, and reciprocal support. This instruction applies to all units assigned to the 62d Airlift Wing and tenant units at McChord AFB. This instruction implements the directives AMCI 15-101, AMC Weather Operations, AFMAN 15-127, Aerospace Weather Operations, and AFI 15-126, Aerospace Weather Operations – Roles and Responsibilities.

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## Chapter 1

### GENERAL PROCEDURES

#### 1.1. General.

1.1.1. The 62d Operations Support Squadron Weather Flight (62 OSS/OSW) is responsible for coordinating all weather support at McChord AFB, WA. Weather support includes, but is not limited to, 24 hours per day meteorological watch with regular dissemination of weather observations and forecasts, aircrew briefings, support to the Western Air Defense Sector exercise/contingency support and staff briefings. Weather products are tailored to meet the criteria important to both flying operations (i.e., airborne aircraft, Control Tower, Consolidated Command Center) and base support agencies (i.e., Maintenance Aircraft Coordination Center (MACC)).

1.1.2. Air Force Weather Reengineering is an Air Staff directed change on how weather support is provided in the future. Scheduled for implementation in 1QFY01, the 25<sup>th</sup> Operational Weather Squadron (OWS), located at Davis-Monthan AFB AZ, will produce and issue all Terminal Aerodrome Forecast (TAFs), forecast weather warnings, watches, and advisories for McChord AFB. McChord's Combat Weather Team (CWT) will be comprised of experienced weather forecasters who will produce and brief mission planning weather through mission execution forecasts, as well as mission debriefs. Weather observing will be performed by dual-qualified weather forecasters until automated observing systems are installed in FY01.

#### 1.1.3. 25 OWS Operating Hours.

1.1.3.1. Staff: Staff services are available from 1400 to 2330 UTC, Monday through Friday, except federal holidays. The master staff directory is located in [Attachment 2](#).

1.1.3.2. Operations: Weather forecasters are on duty 24 hours a day, 7 days a week in the CONUS Operations Production Flight, 25 OWS/WXA and in the Theater, Combat Weather Flight (USSOUTHCOM Cell), 25 OWS/WXO.

#### 1.2. Concept of Operations.

1.2.1. The 62 OSS Weather Flight will provide weather information to all supported agencies for the purposes of operational and planning decisions and for the protection of base resources. The 62 OSS Weather Flight tailors this information, when possible, to the specific needs of supported agencies. Forecasting and observing services are normally provided 24 hours a day, 7 days a week. Limited duty may become necessary during manning shortages and will be coordinated through the 62d Operations Group Commander. Weather services are normally provided for military or military-related operational use only.

1.2.2. Weather flight and 25 OWS personnel will follow the duty priorities listed in [Table 1.1](#) and [Table 1.2](#), respectively. The shift supervisor will use judgment in complying with these priorities, especially where there is imminent danger to life and (or) property.

**Table 1.1. 62 OSS/OSW Duty Priority List.**

<b>PRIORITY</b>	<b>DUTIES</b>
1	Perform Emergency War Order (EWO) Taskings – includes WADS active scrambles
2	Respond To Aircraft/Ground Emergencies
3	Take and Disseminate Surface Weather Observations Locally/Provide “Eyes Forward” Support to 25 OWS
4	Respond to Pilot to Metro Service (PMSV) and Phone Patch Contacts
5	Perform Coordinated Metwatch Support (METSAT, PIREPs, LAWCs) (See Note)
6	Severe Weather Action Procedures (SWAP)
7	Produce and Disseminate Mission Execution Forecasts (MEFs) – these include disseminating warnings to WADS locations, support to CP and MACC, and issuing observed advisories
8	Disseminate PIREPs Locally
9	Relay Urgent PIREPs (UUA) and Special AIREPs (ARS) to OWS
10	Transmit Surface Observations and PIREPs/AIREPs Longline
11	Prepare and Brief Flight MEFs to Local Supported Units (DD Form 175-1 and AMC Form 181s)
12	Perform MISSIONWATCH
13	Provide Other Briefing Support

**NOTE:** Local dissemination refers to weather observations, forecasts, watches, advisories and warnings that are sent to base agencies (e.g., Base Operations, the Consolidated Command Center, etc.) on the Automated Meteorological Information System (AMIS) (See format at [Attachment 1](#)). Due to limited manning, the volume of telephone traffic into the 62 OSS Weather Flight, and the time critical nature of weather information, agencies who have AMIS Flight Operations (FO) terminals should use them to their fullest potential prior to contacting the 62 OSS Weather Flight for weather information. Agencies without an AMIS FO terminal, who have a valid and regular need for weather data available on the FO, should contact the 62 OSS Weather Flight for assistance in acquiring an FO terminal or receive directions on how to use the McChord Weather Flight Product Viewer (See [1.3.3](#)).

**Table 1.2. 25 OWS Duty Priority List.**

<b>Priority</b>	<b>Duties</b>
1	Perform Emergency War Order Taskings
2	Respond To Aircraft/Ground Emergencies
3	Respond to In-flight Pilot to Forecaster Service Contacts
4	Respond To Weather Watches, Warnings, Advisories, Etc.
5	Disseminate Urgent (UUA) Pilot Reports (PIREPs)
6	Prepare and Disseminate Terminal Aerodrome Forecasts (TAFs)
7	Prepare and Disseminate Operational-Level Graphics and Alphanumeric Products

Priority	Duties
8	Prepare and Disseminate Tactical-Level Forecasts
9	Provide Scheduled Flight Weather Briefings
10	Provide Non-Scheduled Flight Weather Briefings
11	Disseminate Routine (UA) PIREPs
12	Provide Other Weather Products, Information, and Weather Briefings
13	Accomplish Other Routine Weather Requirements
14	Accomplish Training Requirements
15	Accomplish Administrative Tasks

**1.3. Operational Support Requirements.** Supported agencies will:

1.3.1. Establish and coordinate all weather support requirements and procedures with the 62 OSS Weather Flight.

1.3.2. Notify 62 OSS Weather Flight of any changes in weather support requirements. This should be done with sufficient advance notice (normally 10 working days) to preclude impact on the BWS and other customers.

1.3.3. Use assigned AMIS FO terminals to the greatest extent possible as a source of weather data. Data provided for McChord AFB includes current observations, 24-hour forecasts, weather watches, warnings, advisories, PIREPs, and observations/forecasts. Personnel who don't have access to an AMIS FO terminal may use the McChord Weather Flight Product Viewer via the McChord Local Area Network and World Wide Web (<http://131.30.176.55>)

**NOTE:** Weather personnel will normally refer callers for this data to their AMIS FO terminal unless the caller has no terminal or their terminal is inoperative and logged out.

**1.4. Supporting References.** The following references are used extensively throughout this instruction and in the operation of the 62 OSS Weather Flight:

1.4.1. AFMAN 15-111, Surface Weather Observations

1.4.2. AFI 15-114, Weather Support Evaluation

1.4.3. AFI 15-118, Requesting Specialized Weather Support

1.4.4. AFMAN 15-124, Meteorological Codes

1.4.5. AFMAN 15-127, Aerospace Weather Operations

1.4.6. AFI 15-126 Aerospace Weather Operations – Roles and Responsibilities

1.4.7. AFI 15-180, Air Force Weather Standardization and Evaluation Program

1.4.8. AMCI 15-101, AMC Weather Operations

1.4.9. AFI 11-202, Volume 3, General Flight Rules

1.4.10. WADSI 15-1, Weather Support for the Western Air Defense Sector

1.4.11. 62 AWI 91-8, Safety, Maintenance, Security, and Safety of Personnel, Aircraft, and Equipment During Severe Weather

## Chapter 2

### WEATHER OBSERVING

**2.1. General.** Weather observers take and record official weather observations hourly and when specific regulatory and locally established thresholds are met (See paragraph [2.3.](#)). The official weather observation point on McChord AFB is located on the north (runway) side of Building 1172, Base Operations. **NOTE:** Because of fixed, eye-level obstructions, the observer must normally walk completely around the Base Operations building to get a comprehensive view of the horizon.

#### 2.2. Terms Explained:

2.2.1. Basic Weather Watch (BWW). A BWW is normally conducted from the 62 OSS Weather Flight by a weather observer who, because of other weather operations duties, cannot monitor the weather continuously. Because of other duties, along with restrictions such as a BWS design that doesn't allow a 360-degree view of the runway complex, etc., the observer cannot be expected to detect and report all weather changes as they occur. The weather observer will recheck weather conditions at intervals not to exceed 20 minutes since the last observation to determine the need for a Local or Special observation. The BWW program involves the following minimum requirements as the basis for the detection of significant changes in weather conditions when any of the following conditions are occurring or are forecast to occur within 1 hour:

2.2.1.1. Ceiling 1,500 feet or less.

2.2.1.2. Visibility 3 miles or less.

2.2.1.3. Precipitation (any form).

2.2.1.4. Fog or Mist.

2.2.1.5. Thunderstorm Activity.

2.2.1.6. When a reliable source (tower personnel, pilots, etc.) reports weather conditions different from the last report.

2.2.2. Cooperative Weather Watch (CWW). CWW is a program wherein qualified non-weather personnel assist the weather observer in monitoring the weather conditions for the occurrence of previously unreported weather conditions which could affect flight safety or which could be critical to the safety or efficiency of other local operations and resources. At McChord AFB a CWW is in effect between the BWS and the Control Tower.

2.2.3. Record (Hourly) Observations (METAR). Record observations are complete weather observations taken hourly. The specific contents of METAR observations are listed in [Attachment 1](#).

2.2.4. Special Observations (SPECI). Special observations are taken to report significant changes in weather elements at units which are required and scheduled to transmit surface observations on long-line circuits. Special observation criteria for McChord AFB are listed in paragraphs [2.3.1.4.](#) through [2.3.1.13.](#)

2.2.5. Local Observations (LOCAL). Local observations are taken primarily to report changes in conditions significant to local airfield operations but do not meet Special Criteria. Local observation criteria for McChord AFB are at paragraphs [2.3.2.1.](#) through [2.3.2.6.](#)

2.2.6. Prevailing Visibility: The greatest visibility equaled or exceeded throughout at least one-half the horizon circle. The visibility does not have to be continuous throughout 180 consecutive degrees; i.e., it may be composed of sectors distributed anywhere around the horizon circle.

2.2.7. Sector Visibility. The visibility in a specified direction representing a 45-degree arc of the horizon circle.

2.2.8. Surface Visibility. The prevailing visibility determined from the usual point, or points of observation. It normally represents a value observed at a height of six feet.

2.2.9. Tower Visibility. The prevailing visibility determined from the Control Tower when the surface visibility is determined from another location such as the weather station.

2.2.10. Runway Visual Range (RVR). A value determined by instruments located alongside and about 14 feet higher than the center line of the runway and calibrated with reference to the sighting of either high-intensity runway lights or the visual contrasts of other targets, whichever yields the greater visual range.

2.2.11. Cloud Ceiling. A term used with reference to the height of the base of a layer aloft or of vertical visibility in a surface based totally obscured condition Ceiling is defined as:

2.2.11.1. The height ascribed to the lowest broken or overcast layer aloft.

2.2.11.2. The vertical visibility into a surface-based obstruction.

### 2.3. Special and Local Observation Criteria:

2.3.1. Special Criteria. Observers will take and disseminate a special weather observation (see paragraph 2.2.4.) for the following criteria:

2.3.1.1. Tornadoes. Tornadic activity.

2.3.1.2. Runway Condition Reading (RCR) changes. Transmitted upon receipt or appended to a METAR or SPECI being taken at the time of notification. **NOTE:** This non-weather criteria is treated as a "SPECI" only for purposes of timely reporting; otherwise, when appended to any observation, the report is considered as additional data and not as SPECI criteria)

2.3.1.3. Tower Visibility. Tower visibility when surface or tower visibility is less than 4 miles and:

2.3.1.3.1. Tower visibility is different from surface visibility by one or more reportable value.

2.3.1.3.2. Was not carried in the previous SPECI or METAR.

2.3.1.4. Ceiling. Ceiling decreases to less than, or if below, increases to equal or exceed the levels noted in the following table:

CEILING CRITERIA	REFERENCES	AVIATION IMPACT
3,000 Feet	AFMAN 15-111 para 2.7.1.1	See AFMAN
1,500 Feet	AFMAN 15-111 para 2.7.1.2	See AFMAN
1,000 Feet	AFMAN 15-111 para 2.7.1.3	See AFMAN

CEILING CRITERIA	REFERENCES	AVIATION IMPACT
700 Feet	AFMAN 15-111 para 2.7.1.4 DOD FLIP	See AFMAN and/or DOD FLIP
600 Feet	DOD FLIP	See DOD FLIP
500 Feet	AFMAN 15-111 para 2.7.1.5 DOD FLIP	See AFMAN and/or DOD FLIP
300 Feet	AFMAN 15-111 para 2.7.1.6. WAD Sector Instruction 15-1	See AFMAN and/or WADSI 15-1
200 Feet	AFMAN 15-111 para 2.7.1.7. DOD FLIP	ILS Runways 16 and 34

2.3.1.5. Sky Condition. A layer of clouds or obscuring phenomena aloft is present below 700 feet and no layer was reported below 700 feet in the preceding METAR or SPECI observation (AFMAN 15-111, paragraph 2.7.2).

2.3.1.6. Visibility. Prevailing visibility decreases to less than, or if below, increases to equal or exceed the levels noted in the following table:

VISIBILITY CRITERIA	REFERENCES	AVIATION IMPACT
3 Statute Miles (SM)	AFMAN 15-111 para 2.7.3.1	See AFMAN
2 ¼ SM	DOD FLIP	See DOD FLIP
2 SM	AFMAN 15-111 para 2.7.3.2 DOD FLIP	See AFMAN and/or DOD FLIP
1 ¾ SM	DOD FLIP	See DOD FLIP
1 ½ SM	DOD FLIP	See DOD FLIP
1 ¼ SM	DOD FLIP	See DOD FLIP
1 SM	AFMAN 15-111 para 2.7.2.3 DOD FLIP	See AFMAN and/or DOD FLIP
¾ SM	DOD FLIP	See DOD FLIP
½ SM	DOD FLIP	See DOD FLIP

2.3.1.7. Thunderstorms. Thunderstorms begin or end. A special is not required to begin a new thunderstorm when one is currently reported as in progress at the station (AFMAN 15-111).

2.3.1.8. Precipitation. Anytime precipitation begins or ends and when (AFMAN 15-111).

2.3.1.8.1. Freezing precipitation or ice pellets begin, end, or change intensity.

2.3.1.8.2. Hail begins or ends.

**NOTE:** Except for freezing rain, freezing drizzle, hail, and ice pellets, a SPECI is not required for changes in type (e.g., drizzle changing to snow grains) or the beginning/ending of one type while another is in progress (e.g., snow changing to rain and snow).

2.3.1.9. Squalls and wind shifts (AFMAN 15-111).

2.3.1.9.1. The 2 minute average wind speed increases at least 16 knots and is sustained at 22 knots or more for at least one minute. A SPECI is not required to report a Squall if one is currently in progress.

2.3.1.9.2. Any wind direction change of 45 degrees or more in less than 15 minutes and the wind speed after the shift is 10 knots or more.

2.3.1.10. Volcanic Ash. Volcanic ash is first observed (AFMAN 15-111).

2.3.1.11. A special observation may be taken anytime the duty observer feels that the meteorological situation is critical to the safety of aircraft.

2.3.1.12. A special observation will be taken within 15 minutes after returning to duty following a break in hourly coverage if an SA observation was not filed as scheduled during that 15-minute period (AFMAN 15-111).

2.3.1.13. A special observation will be taken for a real-world nuclear accident.

2.3.2. Local Criteria. A local observation (see paragraph 2.2.5.) will be taken for the following criteria:

2.3.2.1. When notified of an aircraft mishap at or near McChord AFB.

2.3.2.2. When notified of a change in the active runway.

2.3.2.3. Runway Visual Range (RVR):

2.3.2.3.1. When RVR increases from 6,000 (1825 m) to 6,000+ (1825+ m) feet (AFMAN 15-111, para 2.8.4.2.1).

2.3.2.3.2. When RVR decreases to less than, or if below, increases to equal or exceed the values listed in the following table:

RVR CRITERIA	REFERENCES	AVIATION IMPACT
6,000 Feet (1825 m)	AFMAN 15-111 para 2.8.4.2.1, DOD FLIP	See AFMAN and/or DOD FLIP
5,000 Feet (1520 m)	AFMAN 15-111 para 2.8.4.2.2, DOD FLIP	See AFMAN and/or DOD FLIP
4,000 Feet (1217 m)	DOD FLIP	See DOD FLIP
2,400 Feet (730 m)	AFMAN 15-111 para 2.7.11, DOD FLIP	See AFMAN and/or DOD FLIP
1,600 Feet (487 m)	DOD FLIP	ILS Runway 34 CAT II
1,200 Feet (365 m)	DOD FLIP	ILS Runway 34 CAT II

2.3.2.3.3. When RVR is first determined as unavailable for the runway in use, and when it is first determined that the RVR is operational, if conditions for reporting RVR still exist.

2.3.2.4. Altimeter setting changes (NOTE: Only the altimeter and PA will be updated). At a frequency not to exceed 35 minutes when there has been a change of 0.01 inch Hg or more since the last locally disseminated value.

2.3.2.5. Precipitation changes from liquid to frozen.

2.3.2.6. Any other meteorological situation which, in the opinion of the observer, is significant to local operations.

## 2.4. Limitations.

2.4.1. McChord AFB weather observers function under the BWW and CWW concept. Due to other essential duties, the observer cannot monitor the weather on a continuous basis. The observer checks conditions at least every 20 minutes and takes observations as warranted using criteria outlined in paragraph 2.3.

2.4.2. The following physical limitations may impact the representation of McChord AFB weather observations.

2.4.2.1. Building 1172 has no windows, thus rapid changes in the weather (i.e., the start and stop of precipitation) may go unnoticed for a short time.

2.4.2.2. Buildings, hangars, parked aircraft and trees block portions of the sky as well as ground visibility reference markers, especially clockwise from south to north.

2.4.2.3. There are few adequate ground visibility reference markers beyond 1 mile. This especially degrades determination of nighttime visibility.

2.4.2.4. Nearby lighting contaminates and complicates observing of nighttime sky conditions.

2.4.2.5. The south end of the runway is not visible from the observation point. When fog and (or) low clouds are present over the approach end of Runway 34 (south of the field), conditions reported from the observation point may not be representative.

**2.5. Meteorological Equipment Locations and Limitations.** Readouts for all meteorological sensors are located in the BWS in Building 1172.

2.5.1. GMQ-32, Transmissometer Sensors, used to measure RVR, are located:

2.5.1.1. On the east side of the mid-point of the runway.

2.5.1.2. On the west side of the Runway 34 end of the runway, south of Taxiway D.

2.5.2. RVR-400, digital RVR readouts, are located in the BWS (for touchdown and rollout) and in the Control Tower.

**NOTE:** In order to have an accredited Category II instrument landing system, FAA standards require that digital readouts to touchdown and rollout RVR must be available/operational in the air traffic Control Tower.

2.5.3. The FMQ-8, Temperature and Dewpoint sensor is located in the open field west of the midpoint of the runway, approximately between the Control Tower and Base Operations. The backup for this sensor is a manual sling psychrometer used at ground level outside Building 1172.

2.5.4. FMQ-13, Surface Wind Measuring Set with sensors at the following locations below. Surface wind direction is reported in degrees relative to magnetic north to McChord AFB (local) users and in degrees relative to true north to agencies outside of McChord (longline).

2.5.4.1. In the grassy area between the East Taxiway and on the Runway 16 side of the field.

2.5.4.2. On the west side of Runway 34, in the sod, between the taxiway and the runway.

2.5.4.3. Instantaneous digital speed and direction readouts are at the following locations. Backup of these systems consists of a hand-held anemometer used near ground level outside of Building 1172.

2.5.4.3.1. 62 OSS Weather Flight: Two FMQ-13 readouts (Runways 16 and 34) with one printer. Switchable between active and inactive ends of the runway.

2.5.4.3.2. Air Traffic Control Tower: Two FMQ-13 readouts (Runways 16 and 34).

2.5.5. GMQ-34, Laser Beam Ceilometer measures cloud base heights accurately up to 12,000 feet. Sensors are located in line with the end of Runways 16 and 34. To measure a cloud base, the cloud must be directly over the projector.

**NOTE:** All sensor readings are verified by our observers to ascertain whether a true ceiling exists, or if a cloud is just over the sensor's beam.

2.5.6. WSR-88D, Doppler Weather Radar, Principle User Processor (PUP), located in the BWS in Building 1172. Limitations include:

2.5.6.1. The PUP receives raw radar data from the antenna site which is located approximately 65 miles north-northwest of McChord AFB. As a result, echoes below approximately 7,000 feet are not detectable in the McChord AFB air traffic control area.

2.5.6.2. The Olympic and Cascades mountain ranges block the radar from detecting echoes located to the west and east of the mountains, respectively.

## 2.6. Alternate Observing Site:

2.6.1. In the event evacuation of the primary observation site (Building 1172) becomes necessary, an alternate observation site will be established. When possible, the alternate site will be in building 313 and will become the official point of observation. All values of reported elements will be estimated. At the alternate observing site, the sole duty of the observer will be taking and transmitting weather observations. Weather observation dissemination from the alternate site is outlined in paragraph 5.7.

2.6.2. If building 313 is unusable, the Control Tower will be used as alternate observation site.

2.6.3. In the event that both building 313 and the Control Tower are unusable, the alternate observation may be established at any other suitable location. Minimum desired requirements for the alternate site are availability of power, a class A telephone, easy access to the outside, and a view of the runway.

**2.7. Wind Chill.** When the temperature decreases to less than 25°F, the 62 OSS Weather Flight will append the Wind Chill Index to the surface observation remarks (i.e., WCI-15) and will contact the Command Center when the wind chill passes through the following values (-15 to -24, -25 to -34, -35 to -44, -45 and lower). Wind chill index values are based on Fahrenheit.

## Chapter 3

### WEATHER FORECASTING

**3.1. General.** Upon reengineering the 25 OWS weather forecasters will provide round-the-clock forecasting services for McChord AFB, the 62d and 446<sup>th</sup> Airlift Wings, transient aircraft, Ft Lewis Army support when the Ft Lewis weather station is closed, and for the WADS (See WADS Instruction 15-1). Forecasting products include, but are not limited to, 24-hour aerodrome forecasts, weather watches, warnings, forecast advisories and transient flight weather briefings. The Weather Flight will provide observed weather warnings and advisories as well as mission execution forecasts for all McChord based aircraft.

#### 3.2. Terms Explained.

3.2.1. Meteorological Watch. The process of monitoring observed and forecast weather and informing supported agencies when certain established weather conditions that could affect their operations or pose a hazard to life or property are occurring or are expected to occur.

3.2.2. Terminal Aerodrome Forecast (TAF) Code. Used by Air Force weather forecasters to encode forecasts. The code is based on World Meteorological Organization Aerodrome Forecast Code, FM 51. See [Attachment 1](#) for an example of an encoded TAF.

3.2.3. BECMG. TAF code change group. BECMG groups are used to forecast a change in the weather from one point in time to another. The change is expected to occur at either a regular or irregular rate at an unspecified time and be complete by the end of the noted time period. BECMG groups will normally be 1 hour and will never be more than 2 hours. **EXAMPLE:** BECMG 1213 indicates a change expected between 1200 UTC and 1300 UTC.

3.2.4. FM. TAF code change group. Used to forecast a change expected to take place at a specified time. **EXAMPLE:** FM13 indicates a change expected to occur at 1300 UTC.

3.2.5. TEMPO. TAF code change group. Used to forecast changes expected to occur frequently or infrequently but briefly between two points in time. TEMPO is used when conditions are expected to occur for less than 1 hour at a time (1 hour 15 minutes for thunderstorms, the extra 15-minute period between the time thunder is last heard and the thunderstorm is officially ended).

3.2.6. UTC. Coordinated Universal Time. Worldwide standard time reference, also known as Z (ZULU) time. At McChord AFB, UTC time is Local Standard Time plus 8 hours (during Daylight Savings Time, plus 7 hours).

**3.3. Terminal Aerodrome Forecast (TAF).** TAFs are by the 25<sup>th</sup> OSW issued three times daily (when the airfield is open) IAW AFMAN 15-124. Unless otherwise specified, the forecast weather elements in the main body of the forecast text (clouds, weather, wind, etc.) apply to the area within a 5-mile radius of the McChord AFB runway complex. Forecast elements represent the most probable conditions expected during the forecast period and in the forecast area. Times of occurrence or changes represent the times conditions are expected to occur.

3.3.1. Scheduled forecast issue times are as follows:

3.3.1.1. 0400 UTC (2000 PST/2100 PDT)

3.3.1.2. 1200 UTC (0400 PST/0500 PDT)

3.3.1.3. 2000 UTC (1200 PST/1300 PDT)

3.3.2. Terminal Aerodrome Forecast (TAF) Specification and Amendment Criteria.

3.3.2.1. Specification Criteria: The McChord AFB TAF will specify the time of occurrence to the nearest hour, duration, and intensity when one or more of the following is expected within the valid period of the forecast.

3.3.2.1.1. Ceiling increases to equal or exceed, or decreases to less than 3000 feet, 1500 feet, 1000 feet, 700 feet, 500 feet, or 200 feet.

3.3.2.1.2. Visibility increases to equal or exceed, or decreases to less than 3 miles, 2 miles, 1 mile or ½ mile.

3.3.2.1.3. Winds.

3.3.2.1.3.1. Speed changes of 10 knots or more, including gusts.

3.3.2.1.3.2. Direction change of 30 degrees or more when the predominant wind speed or gusts are expected to be in excess of 15 knots.

3.3.2.1.4. Precipitation.

3.3.2.1.5. Thunderstorms (including lightning).

3.3.2.1.6. Weather warning criteria.

3.3.2.1.7. Icing and (or) turbulence not associated with thunderstorms.

3.3.2.1.8. Non-convective Low-Level Wind Shear (LLWS).

3.3.2.1.9. Any other meteorological condition which, in the opinion of the forecaster, is essential to adequately describe the weather.

3.3.2.2. Amendment Criteria. TAFs will be amended for the following criteria using the guidelines set forth in paragraph [3.3.4](#).

3.3.2.2.1. Ceiling and visibility.

3.3.2.2.1.1. Ceiling and (or) visibility greater than or equal to 3,000 feet and (or) 3 miles.

3.3.2.2.1.2. Ceiling and (or) visibility equal to or greater than 1,500 feet and (or) 3 miles, but less than 3,000 feet and (or) 3 miles.

3.3.2.2.1.3. Ceiling and (or) visibility equal to or greater than 1000 feet and (or) 2 miles, but less than 1500 feet and (or) 3 miles.

3.3.2.2.1.4. Ceiling and (or) visibility equal to or greater than 700 feet and (or) 1 miles, but less than 1000 feet and (or) 2 miles.

3.3.2.2.1.5. Ceiling and (or) visibility equal to or greater than 500 feet and (or) 1/2 mile, but less than 700 feet and (or) 1 miles.

3.3.2.2.1.6. Ceiling and (or) visibility less than 200 feet and (or) 1/2 mile.

3.3.2.2.2. Wind.

3.3.2.2.2.1. An error in forecasted winds of 10 knots or more (including gusts).

3.3.2.2.2. An error in forecasted winds of 30 degrees or more when the predominant wind speed (including gusts) is, or is forecast to be, in excess of 15 knots.

3.3.2.2.3. Precipitation when:

3.3.2.2.3.1. Freezing precipitation begins or ends.

3.3.2.2.3.2. The beginning or ending of precipitation causes a weather warning or advisory to be issued, canceled, or amended.

3.3.2.2.3.3. The forecaster considers the precipitation (or lack of) to be operationally significant.

3.3.2.3. Beginning or ending of turbulence and (or) icing conditions, not associated with thunderstorms, from the surface to 10,000 feet (MSL) which first meet, exceed, or decrease below moderate or greater thresholds for CAT II aircraft and wasn't specified in the forecast.

3.3.2.4. . Non-convective Low Level Wind Shear (LLWS)

3.3.2.4.1. Is occurring and is expected to continue, or is expected to begin, but is not specified in the forecast.

3.3.2.4.2. Is forecast in the TAF, but is not expected to occur during the forecast period.

3.3.2.5. Any of the locally established criteria for weather warnings which:

3.3.2.5.1. Occur, or are expected to occur, during the forecast period but weren't correctly specified in the forecast.

3.3.2.5.2. Are no longer occurring or expected to occur.

3.3.2.6. The forecaster considers the occurrence or non-occurrence of other elements not actually requiring an amendment to be operationally significant.

3.3.3. Specification Criteria. Each TAF will specify the time of occurrence (to the nearest hour), the duration, and the intensity, where applicable, of expected weather conditions. Paragraph [3.3.2.1](#) lists weather conditions that are specified in the TAFs if the conditions are expected during the forecast period.

3.3.4. TAF Amendments. 25 OWS forecasters will ensure the TAF is representative of expected or actual conditions. 25 OWS forecasters are required to amend the TAF for the criteria listed in paragraph [3.3.2.2](#).

3.3.4.1. 25 OWS forecasters may amend the TAF anytime they consider it advisable in the interest of safety, efficiency of aircraft operations, flight planning, operational control, or to assist in-flight aircraft to ensure the forecast is representative of actual or forecast conditions.

3.3.4.2. 25 OWS forecasters will amend the TAF anytime an unforecast change is expected to occur, or occurs, and is expected to last at least 30 minutes and is not correctly forecast by the next whole hour. An amendment is also required when a forecast condition does not occur by the specified hour and is not expected to occur within the next 30 minutes.

3.3.4.3. Temporary (TEMPO) groups will be amended anytime they become predominant or is not expected to occur.

**3.4. Weather Briefings.** The 62 OSS Weather Flight provides weather briefings to a number of customers on a scheduled and unscheduled basis. These briefings provide commanders and staff, operations, and aircrew personnel with valuable weather information for planning and decision making. Crisis Action Team (CAT), WADS Battle Staff, Mobility Concept, Sequence and Loading Team (SALT), stand-up, planning, aircrew and climatological briefings are provided routinely upon request. New briefing requirements and (or) format changes for existing briefings (i.e., new software requirements) must be coordinated with 62 OSS Weather Flight at least 10 working days prior to anticipated implementation.

3.4.1. Flight weather briefings will be provided IAW AMCI 15-101 and AFMAN 15-127. 62 and 446 AW missions will be briefed in accordance with the Wing Operations Plan (WOP) Part II, C2IPS, and Daily Schedule.

**NOTE:** Aircrews who receive a faxed Weather Briefing form must contact (either by telephone or in person) the duty forecaster prior to take-off for the weather briefing to be considered official.

3.4.2. Written weather briefings will be prepared using DD Form 175-1, Flight Weather Briefing; AMC Form 181, AMC Mission Weather Briefing; or a suitable, locally-approved substitute.

3.4.3. Aircrews may receive verbal briefings upon request. Verbal weather briefings will be recorded on an AF Form 3131, General Purpose (62 OSS/OSW overprint).

3.4.4. Upon reengineering, flight weather briefings for transient aircrews will be provided by the 25<sup>th</sup> OWS. Transient aircrews are responsible for coordinating support for these briefings using available means of internet, fax or telephone to coordinate and receive weather information from the 25<sup>th</sup> OWS.

**3.5. Pilot-to-Metro Service (PMSV).** The BWS operates a PMSV on Ultra High Frequency (UHF) 342.5 Mhz. PMSV is the primary means of disseminating weather information to airborne aircraft. The Control Tower will be notified of any PMSV outage and the expected time of return to service. During such outages, Control Tower personnel will relay all PIREPs to the duty observer or forecaster. The PMSV is unusable from the 095 to 102 degree radial beyond 34 nautical miles and below 9,400 feet.

### **3.6. Alternate Forecast Site.**

3.6.1. In the event evacuation of the primary forecast site (Building 1172) becomes necessary, an alternate forecast site will be established. Whenever possible, the alternate forecast site will be Building 313.

3.6.2. In the event Building 313 is unusable, the alternate forecast site may be established at any other suitable location. Minimum desired requirements for the alternate site are availability of power, a Class A telephone, and a data/modem/LAN connection with Class A access.

### **3.7. Limitations.**

3.7.1. Duty forecasters, at McChord or 25 OWS upon reengineering, will provide support to the WADS. This support requires meteorological watch of five WADS bases, flight planning bulletins, active area air scramble meteorological watches, weather warnings/advisories and flight weather briefings. During periods of inclement weather and intensified operations tempo (i.e., exercises, active air scrambles, etc.) the WADS workload could potentially impact local products such as forecasts and support.

3.7.2. Lack of nearby upper air observing sites prevent accurate analysis of the atmosphere over McChord.

3.7.3. Geographical influences contribute to sudden weather changes and prevent accurate analysis of frontal positions in the Puget Sound area.

3.7.4. Pilot-to-Metro Service (PMSV) is unusable from the 095 to 102 degree radial beyond 34 nautical miles and below 9,400 feet.

## Chapter 4

### WEATHER WATCHES, WARNINGS, AND ADVISORIES

**4.1. General.** Certain weather conditions endanger property or life, pose a safety hazard, or adversely affect a supported agency's operations. The WF and the 25 OWS will monitor observations and forecasts for these conditions and advise support agencies when these conditions are observed or forecasted. Weather watches, warnings, and advisories are the vehicles through which supported agencies are notified of these critical weather conditions.

#### 4.2. Terms Explained.

4.2.1. Weather Advisory (WA). A special notice of observed or forecast weather conditions to alert supported agencies of weather phenomena that may impact its operation is occurring or is expected to occur.

4.2.2. Observed Weather Advisory. An advisory issued when critical weather conditions are observed to occur. Observed weather advisories are canceled when the weather conditions are no longer observed.

**NOTE:** For safety reasons, observed advisories are canceled not sooner than 30 minutes since the last observed occurrence (e.g., 25 knot crosswinds last observed at 1200Z, the advisory cannot be canceled until 1230Z).

4.2.3. Forecast Weather Advisory. A forecast of expected critical weather conditions accompanied by a valid period.

4.2.4. Weather Watch. A special notice of forecast weather phenomena that alerts supported agencies to the *potential* for dangerous weather conditions. Watches are issued to provide the maximum possible forewarning of these mission limiting and dangerous weather conditions, typically on the order of 12 to 24 hours in advance (lightning is the exception, requiring at least 30 minutes advance leadtime). Watches may or may not be followed by a weather warning.

4.2.5. Weather Warning (WW). A special notice provided to a supported agency when an established weather condition of such intensity as to pose a hazard to life or property is occurring or is expected to occur. A weather warning is issued for situations that require the supported agency to take protective action.

4.2.6. Desired Lead-time (DLT). The minimum amount of advance notice a supported agency needs to react to an advisory or warning (within the limits of state-of-the-art forecast capabilities).

4.2.7. Capability (CAP). The number of weather warnings and (or) advisories verified with desired lead-time divided by the total number of warnings/advisories required--expressed as a percentage. For example: If four warnings were issued and three verified--weather warning capability is 75 percent. It is used to measure a forecast units' ability to effectively meet customer defined desired lead-times. A perfect capability would be 100 percent.

4.2.8. False Alarm Rate (FAR). The number of weather warnings and (or) advisories verified with positive lead-time divided by the total number of warnings issued. For example: If four warnings were issued and three verified--FAR is 25 percent. It is used to measure a forecast unit's ability to meet customer defined desired lead-times--unlike the capability index, the higher the FAR, the lower the effec-

tiveness of the unit. A perfect FAR would be 0 percent (i.e., every predicted forecast warning/advisory event occurred).

**4.3. Warning and Advisory Support Abilities.** 62 OSS Weather Flight coordinates with the 25<sup>th</sup> OWS on customer desired lead-times for weather advisories and warnings. Base users of warnings/advisories should determine, from technical order specifications or through manpower analysis, the time required to protect base resources from various weather threats. This minimum reaction time is the basis for desired lead-time (DLT) for advisories and warnings. Supported agencies must understand that FARs normally will increase as the DLT is increased. It is operationally critical that DLTs be confined to the actual minimum reaction time required. Following is a table (extracted from AFP 105-30, Weather Station Management Guide) outlining Air Force Weather "industry standards" for selected criteria and lead-times. **NOTE:** Due to a lack of statistics for winds > 30 knots, statistics are given for winds > 35 knots. Although not exact, the 35 knot statistics would be comparable.

#### Air Force Weather (AFW) Lead-time Capabilities

<u>LEAD-TIME</u>	<u>TORNADOES</u>		<u>WIND &gt;50 KNOTS</u>		<u>WIND &gt;35 KNOTS</u>		<u>FREEZING RAIN</u>	
	CAP%	FAR%	CAP%	FAR%	CAP%	FAR%	CAP%	FAR%
15 Minutes	26	84	65	73	70	69	54	64
30 Minutes	15	91	55	77	63	72	48	68
45 Minutes	11	94	45	81	53	77	38	74
60 Minutes	10	94	40	80	46	80	34	77
90 Minutes	5	97	28	88	32	86	25	83

**4.4. McChord AFB Weather Watches (AFMAN 15-127):** Watches are issued by the 25 OWS based on atmospheric potential and are meant to give users a head-start on required preparations. Users should take all precautionary measures possible (i.e., securing unneeded equipment, tying down aircraft not scheduled for flying, rescheduling outdoor activities/maintenance, etc.) so as to decrease reaction time when an actual warning is issued. Watches, with the exception of lightning (30 minutes), do not have desired lead-times associated with them, however, they are typically issued 12 to 24 hours prior to the onset of the expected weather event. The following are the Weather Watch criteria for McChord AFB:

4.4.1. Tornadoes.

4.4.2. Severe thunderstorms. (Defined as thunderstorms with winds greater than or equal to 50 knots and (or) hail greater than or equal to 3/4 of an inch)

4.4.3. Heavy snow. (Greater than or equal to 2 inches in 12 hours.)

4.4.4. Freezing precipitation. (Freezing rain or drizzle.)

4.4.5. Surface winds. Greater than or equal to 50 knots (Not associated with thunderstorms.).

4.4.6. Lightning. (Defined as lightning within a five nautical mile radius of the center of the runway complex)

**4.5. McChord AFB Weather Warnings (62 AWI 91-8):** Warnings for McChord AFB are issued by the 25 OWS except for the Lightning Warning which is issued by the WF as an observed warning whenever lightning is detected. Warnings cover an area within a five nautical mile radius of the center of the runway complex. Desired lead-times are listed after each criteria.

- 4.5.1. Tornado - 30 minute lead-time
- 4.5.2. 3/4 inch hail - 120 minute lead-time
- 4.5.3. Winds greater than or equal to 50 knots - 120 minute lead-time
- 4.5.4. Winds greater than 30 knots but less than 50 knots - 90 minute lead-time
- 4.5.5. Freezing Precipitation (i.e., freezing rain or freezing drizzle) - 90 minute lead-time
- 4.5.6. Heavy Snow (greater than or equal to 2 inches in 12-hours) – 90 minute lead-time
- 4.5.7. Lightning - Observed or Imminent (No lead-time required, although watch should have been previously issued)

**4.6. McChord AFB Forecast Weather Advisories (62 AWI 91-8):** This advisory is issued by the 25<sup>th</sup> OSW for snow with less than two inches accumulation - 60 minutes.

**4.7. McChord AFB Observed Weather Advisories (Airframe Specific Weather Sensitivities) are issued by McChord WF forecasters for the following criteria:**

- 4.7.1. Low level wind shear (LLWS) observed below 2,000 feet within five nautical miles of the McChord AFB runway complex.
- 4.7.2. Severe or greater turbulence observed within five nautical miles of the McChord AFB runway complex.
- 4.7.3. Moderate or greater icing observed within five nautical miles of the McChord AFB runway complex.
- 4.7.4. Thunderstorms observed in the McChord AFB Local Flying Area (LFA) (See 62 AWI 13-2 for LFA boundaries).
- 4.7.5. Runway crosswinds greater than 25 knots observed at McChord AFB.
- 4.7.6. Runway crosswinds greater than 35 knots observed at McChord AFB.

**4.8. Maintenance Control and 62d Communications Squadron Observed Weather Advisories. (Note: Notification is made on first occurrence, and cancellation is required after 30 minutes of non-occurrence) (62 AWI 91-8) The following advisories are issued by the WF.**

- 4.8.1. Surface winds greater than or equal to 20 knots observed at McChord AFB. **(MACC only)**
- 4.8.2. Surface winds greater than or equal to 25 knots observed at McChord AFB. **(MACC only)**
- 4.8.3. Surface winds greater than or equal to 40 knots observed at McChord AFB. **(MACC and 62 CS)**
- 4.8.4. Surface winds greater than or equal to 60 knots observed at McChord AFB. **(MACC and 62 CS)**

## Chapter 5

### DISSEMINATION OF WEATHER INFORMATION

**5.1. General.** The 62 OSS Weather Flight will assist supported agencies in maintaining an efficient, effective means of disseminating weather support information. Procedures developed to this end must ensure that weather personnel do not spend more time communicating than monitoring weather conditions. All units receiving weather support must be involved in a continuous program of evaluation and improvement of the weather dissemination system, including inter-unit dissemination. Weather dissemination procedures must ensure the information is received by those who need it. Due to limited manning and the time-critical nature of this information, agencies with AMIS terminals should use them to their fullest potential prior to contacting the WF. Agencies without AMIS terminals who have a valid and regular need for weather data available on the AMIS should utilize the McChord Weather Flight product viewer via the McChord Local Area Network and World Wide Web site at ([http:// 131.30.176.55](http://131.30.176.55)).

#### **5.2. Terms Explained.**

5.2.1. Longline Communications. Communications circuits that deliver weather products to the Automated Weather Network (AWN) for distribution to worldwide users.

5.2.2. Local Communications. Communications circuits that deliver weather products to users on McChord AFB only.

**NOTE:** Weather products (TAFs, observations, PIREPs, etc.) are typically encoded differently for longline and local transmissions.

5.2.3. Pilot Reports (PIREPs): Pilot reports of airborne weather conditions. PIREPs are normally transmitted both locally and longline.

#### **5.3. Automated Meteorological Information System (AMIS).**

5.3.1. The primary means of disseminating weather information on McChord AFB is via AMIS. Those units that do not have an AMIS terminal but require various weather information (i.e., warnings/advisories) should contact the closest AMIS user in their organization for inclusion on their notification system.

5.3.2. The AMIS is used to disseminate the following information:

5.3.2.1. McChord AFB observations.

5.3.2.2. McChord AFB TAFs and Amendments.

5.3.2.3. McChord AFB Weather Warnings and Watches.

5.3.2.4. McChord AFB forecast and observed Weather Advisories.

5.3.2.5. McChord AFB PIREPs.

**5.4. Weather Watch, Warning, and Advisory Dissemination.** The timely dissemination of weather warnings and advisories is critical to the ability of units to prepare/respond to the threat of dangerous/mis-mission limiting weather. Watches, warnings, and advisories are transmitted to customers using the AMIS

system. See [Attachment 2](#) and [Attachment 3](#) for a detailed matrix of the recipients of McChord AFB Warnings and Advisories.

**5.5. AMIS Local Dissemination Back-up Procedures.** When the AMIS system is inoperative, the WF will locally disseminate weather data to the agencies listed in [Attachment 2](#) and [Attachment 3](#).

**5.6. Total Communications Outage.** When the Weather Flight experiences a total communications outage or a transfer to an alternate location, the Weather Flight will locally disseminate via telephone: weather observations, forecasts, warnings and advisories to the agencies listed in [Attachment 3](#).

**5.7. Public Release of Weather Information.** The 62 OSS Weather Flight will forward all requests for weather information from non-DOD/public agencies to the 62 AW Public Affairs (PA) office. 62 OSS Weather Flight will not routinely provide McChord AFB historical or real-time weather data to non-governmental agencies.

## Chapter 6

### SPECIAL MISSION REQUIREMENTS

**6.1. General.** The previous chapters outlined support requirements for the majority of the operations on McCord AFB. Information on units requiring unique support are outlined in this chapter. Any special support requirements not covered here should be coordinated with 62 OSS Weather Flight at least 10 working days prior to the start of the support.

**6.2. 62 AW Commander and Staff.** The 62 OSS Weather Flight will provide weather briefings at scheduled 62 AW Senior Staff meetings and upon request. The 62 OSS Weather Flight will also respond to any recall as required by the 62 AW Commander.

**6.3. 62 AW Safety.** The 62 OSS Weather Flight will provide meteorological data and (or) personnel to assist in the investigation of ground or aircraft mishaps, as required.

**6.4. 62d Communications Squadron (62 CS):**

6.4.1. The 62 OSS Weather Flight will notify 62 CS Customer Service of all communications and support equipment outages, interruptions, and restorals. The duty observer will open and close all job control numbers regarding meteorological and communications support equipment with customer service, except AMIS, MIST, and RADAC outages not related to local circuits.

6.4.2. The 62 OSS Weather Flight will assist 62 CS Mission Systems Flight (SCM) with any mission impact reports and coordinate scheduled maintenance to minimize the impact on weather operations.

**6.5. 62d Civil Engineer Squadron (62 CES), US Army Corps of Engineers, and HQ AMC/DOWV.**

62 OSS Weather Flight will provide these agencies with a summary of the previous month's weather information. This summary will generally include:

6.5.1. Daily and average monthly maximum and minimum temperatures.

6.5.2. Snowfall and snow depth.

6.5.3. Cooling and heating degree days.

6.5.4. Daily peak wind direction and speed.

6.5.5. Total daily, monthly, and yearly precipitation.

6.5.6. Daily occurrence of thunderstorms.

6.5.7. Sky condition and weather types.

6.5.8. Forecasting and observing metrics along with weather advisory, watch, and warning metrics.

**6.6. 62d Operations Support Squadron Air Traffic Control (62 OSS/OSAB).** The 62 OSS Weather Flight will provide training and certification of air traffic control personnel to take limited weather observations including tower visibility and to participate in the Cooperative Weather Watch program as described in [Chapter 7](#).

**6.7. 62 AW Consolidated Command Center and Other Wing Agencies.** 62 OSS Weather Flight will provide mission planning weather (the Close Watch) no-later-than 0300 local each morning. Additionally, the 62 OSS Weather Flight will coordinate with the 62 AW Consolidated Command Center on the potential for Weather Protocol. Weather Protocol will be declared for significant forecasted snowfall or icing. The 62 OSS Weather Flight will initiate Weather Protocol if inclement weather is forecasted more than 24 hours in advance.

**6.8. Additional Support.**

6.8.1. During volcanic eruptions, the 62 OSS Weather Flight will provide, when requested, upper level wind forecasts to the Consolidated Command Center, 62 OSS Base Operations (OSAA), and 62 CES Emergency Response Flight (CETS). Upon activation of the Crisis Action Team, 62 OSS Weather Flight personnel will provide briefings on current and forecast weather, to include dispersal bases.

6.8.2. 62 OSS Weather Flight will coordinate weather support for 62 and 446 AW Joint Airborne/Air Transportability Training (JA/ATT).

6.8.3. 62 OSS Weather Flight will transmit an Earthquake Bulletin directly to the National Earthquake Center via the AWN upon experiencing any seismic activity.

## Chapter 7

### RECIPROCAL SUPPORT

#### 7.1. 62 AW Consolidated Command Center (CP). The Consolidated Command Center will:

- 7.1.1. Disseminate selected weather watches, warnings and advisories to the base leadership and to airborne aircraft.
- 7.1.2. Relay weather advisory/watch/warning information within the Operation complex, and to the Logistics Group as required.
- 7.1.3. Ensure that the duty forecaster receives current copies of Computer Flight Plans (CFP) as soon as possible so they may check the products for meteorological accuracy. Significant forecast deviations or manual computer wind updates that could adversely affect scheduled flights will be given immediately to the Consolidated Command Center.
- 7.1.4. Weather Protocol. The CP will direct the implementation of Weather Protocol. In addition, the CP will initiate Weather Protocol when a Weather Watch is issued for significant snow or icing and/or the forecasted inclement weather is less than 24 hours in advance.
- 7.1.5. Relay any changes in aircraft departure times, mission cancellations and routes within 12 hours of mission launch time.

#### 7.2. Base Operations (62 OSS/OSAA). Base Operations will:

- 7.2.1. Disseminate weather warnings and advisories over the secondary crash phone network.
- 7.2.2. Take appropriate Notice to Airman (NOTAM) action when notified by the 62 OSS Weather Flight of change in the operational status of the CAT II Runway Visual Range (RVR) system.
- 7.2.3. Transmit NOTAMs via the AMIS.
- 7.2.4. Notify 62 OSS Weather Flight immediately of all changes in runway conditions.

#### 7.3. Control Tower (62 OSS/OSAB). The Control Tower will:

- 7.3.1. Participate in the Cooperative Weather Watch Program and will notify the weather observer when any of the following weather conditions occur and are not in the latest available observation:
  - 7.3.1.1. Precipitation starts or stops.
  - 7.3.1.2. Wind gusts of 20 knots or greater, when no gusts are forecast.
  - 7.3.1.3. Thunderstorms and (or) lightning is initially observed.
  - 7.3.1.4. Rapid decrease of visibility that lowers any sector visibility to below 6 miles.
  - 7.3.1.5. Any time special criteria for prevailing visibility (3, 2 ¼, 2, 1 ¾, 1 ½, 1 ¼, 1, ¾ or ½ SM) is met and different than that currently being reported in the latest surface observation.
  - 7.3.1.6. Any weather phenomena that might be considered significant.
- 7.3.2. Relay all pilot reports of weather information to the 62 OSS Weather Flight duty forecaster or observer.

7.3.3. Relay all runway, wind sensor and light setting changes when the airfield is experiencing reduced visibility.

7.3.4. Perform a PMSV radio check, upon request.

7.3.5. Notify 62 OSS Weather Flight when wind equipment:

7.3.5.1. Is inoperative.

7.3.5.2. Readings differ from visual references.

7.3.6. Provide wind sensor change to the inactive end of the runway upon request of 62 OSS Weather Flight.

7.3.7. Monitor 62 OSS Weather Flight PMSV frequency (UHF 342.5 Mhz) during outages in accordance with established duty priorities.

7.3.8. Provide Air Traffic Control indoctrination training to 62 OSS Weather Flight personnel, upon request.

**7.4. 62d Communications Squadron (62 CS).** The 62 CS will:

7.4.1. Maintain the weather sensing and display equipment identified in paragraph 7.4.1.2 (MET-NAV, 62d CS/SCMW). Exceptions are contract equipment maintained by civilian contractors with 62d Logistics Group, Maintenance Squadron Superintendent (62 MXS/LGM) monitoring vendor performance. The following restoration time codes apply:

Code A - Within 30 minutes during duty hours; however, a 1-hour response time is permitted during non-duty hours. Deferment of maintenance may occur only with the concurrence of both the Chief of Maintenance and the user.

Code B - A response time of 30-minutes is required during duty hours, 1 hour during non-duty hours. Maintenance may be deferred after 2200 with concurrence of both the Chief of Maintenance and the 62 OSS Weather Flight.

Code C - A response time of 30 minutes during duty hours only--single shift maintenance unless otherwise requested.

Code D - Response time determined by Chief of Maintenance and the 62 OSS Weather Flight.

7.4.2. Restoration priorities: The following order of restoration priorities listed under the major equipment headings applies to the listed equipment/facilities:

<i>PRIORITY</i>		<i>CODE</i>	<i>PRIORITY</i>		<i>CODE</i>
1	GMQ-32 (Runway Visibility)	A	6	FMQ-8 (Temp/Dewpoint)	C
2	RVR-400 (Runway Visibility)	A	7	ML-658 (DBASI Barometer)	C
3	FMQ-13 (Runway Winds)	A	8	ML-102 (Aneroid Barometer)	C
4	GMQ-34 (Cloud Height Set)	A	9	ML-17 (Rain Gauge)	C
5	WSR-88D (Principle User Processing [PUP] Group)	A			

**NOTE:** For those systems with the same restoration code, should simultaneous failures occur, response will be in the order as listed unless deviation is requested by the 62 OSS Weather Flight.

7.4.3. Maintain the highest restoral priority for building 1172 to include the 62 OSS/OSW.

**7.5. 62 OSS Airlift Operations (62 OSS/OSO).** When the OG Web is down, the 62 OSS Airlift Operations will ensure that the duty forecaster receives a copy of the 62 AW daily flying schedules as soon as practical. Airlift Operations will ensure any changes are expeditiously passed to the forecaster, including changes to departure times, mission cancellations and routes outside of 12 hours of mission launch time.

**7.6. Pilot Weather Reports (PIREPs) and Air Reports (AIREPs).** Pilots will immediately report hazardous weather conditions and volcanic activity to the ARTCC, terminal ATC, or FSS. Additionally, pilots are urged to report any significant flight condition information. In all cases, follow with a report to a Pilot-to-Metro Service (PMSV) to ensure rapid dissemination to other using agencies and aircrews. Air traffic control tower personnel will relay any PIREPs received to the 62 OSS Weather Flight

DARREN W. McDEW, Colonel, USAF  
Commander, 62d Operations Group

**Attachment 1****AMIS WEATHER DISSEMINATION FORMATS****A1.1. Weather Observations.**

## A1.1.1. Record (Hourly) Observation:

RECEIVED 16/1658

KTCM METAR 1655Z 19009KT 20SM SCT025 BKN035TCU BKN070 13/10 ALSTG 30.02 RMK  
WR// PA +232 58/DR

## A1.1.2. Special Observation:

RECEIVED 16/1624Z

KTCM SPECI 1723Z 18010G16 3SM -SHRA BKN025 12/08 ALSTG 29.98 PA +270 26/KY

## A1.1.3. Single Element Special:

RECEIVED 16/1635Z

KTCM SPECI 1634 TOWER VIS 2 34/CM

## A1.1.4. Local Observation:

RECEIVED 16/1728Z

KTCM LOCAL 1727 ALSTG 29.98 PA +270 27/JB

**A1.2. Terminal Aerodrome Forecasts (TAFs).**

## A1.2.1. Scheduled TAF:

RECEIVED 16/1210Z

KTCM FCST 1212 VRB04KT 7 BKN020 BKN070 BKN100 LGT MXD ICG 070-120  
ALSTG29.97INSBECMG 16-17 21012KT 7 SCT020 BKN070 BKN120 BKN200 LGT MXD ICG 080-170 LGT  
TURB SFC-050 ALSTG30.03INS

BECMG 03-04 23008KT 7 FEW035 SCT100 SCT250 ALSTG30.15INS

BECMG 10-11 VRB04KT 3 BR FEW250 T16/23Z T09/11Z ALSTG30.25INS

## A1.2.2. Amended TAF:

RECEIVED 16/1539Z

KTCM FCST AMD 1612 VRB04KT 7 BKN020 BKN070 BKN100 LGT MXD ICG 070-120  
ALSTG29.97INS

BECMG 17-18 21012KT 7 SCT020 BKN070 BKN120 BKN200 LGT MXD ICG 080-170 LGT TURB  
SFC-050 ALSTG30.03INS

BECMG 03-04 23008KT 7 FEW035 SCT100 SCT250 ALSTG30.15INS

BECMG 10-11 VRB04KT 3 BR FEW250 ALSTG30.25INS T16/23Z 09/11Z AMD 1638Z

### **A1.3. Weather Advisory.**

#### A1.3.1. Local Flying Area Advisory.

RECEIVED 03/0118Z

LOCAL FLYING AREA WEATHER ADVISORY 07-010

VALID 03/0117Z (02/1817L) TO UFN

THUNDERSTORMS IN THE MCCHORD LOCAL FLYING AREA.

THUNDERSTORMS ARE CURRENTLY BEING OBSERVED IN EASTERN WA AND SE ID.

#### A1.3.2. Observed Weather Advisory.

RECEIVED 03/0140Z

MCCHORD AFB OBSERVED WEATHER ADVISORY 07-011

VALID 03/0139Z (02/1839L) TO UFN

WIND SHEAR CONDITIONS (WSCONDS) OBSERVED BELOW 2000 FT WITHIN 5 NM OF THE  
MCCHORD AFB RUNWAY COMPLEX..

WSCONDS IS CURRENTLY BEING OBSERVED BELOW 2000 FT ON THE MCCHORD AFB  
RUNWAY COMPLEX.

39/MR

#### A1.3.3. Forecast Weather Advisory.

RECEIVED 03/0150Z

MCCHORD AFB FORECAST WEATHER ADVISORY 07-012

VALID 03/0300Z (02/2000L) TO 03/0900Z (03/0200L)

SNOW WITH LESS THAN 2 INCHES ACCUMULATION

SNOWFALL WITH LESS THAN 2 INCHES ACCUMULATION IS EXPECTED AT  
TCM--EXPECTED ACCUMULATION IS 1/2 INCH.

51/DK

### **A1.4. Weather Warnings/Watches.**

#### A1.4.1. Weather Watch.

RECEIVED 03/0200Z

MCCHORD AFB WEATHER WATCH 07-013

VALID 03/1400Z (03/0700L) TO 03/2000Z (1300L)

50-KNOT WINDS.

THE POTENTIAL EXISTS FOR SURFACE WINDS OF 50 KNOTS OR GREATER ON MCCHORD AFB DURING THE VALID PERIOD NOTED ABOVE. A WARNING WILL BE ISSUED WHEN AND IF CONDITIONS WARRANT.

A1.4.2. Weather Warning

RECEIVED 03/1300Z

MCCHORD AFB WEATHER WARNING 07-014

VALID 03/1500Z (03/0800L) TO 03/1800Z (03/1100L)

50-KNOT WINDS.

SURFACE WINDS GREATER THAN OR EQUAL TO 50 KNOTS ARE EXPECTED AT MCCHORD AFB. EXPECTED WINDS WILL BE FROM THE SOUTHWEST AT 35 KNOTS WITH GUSTS TO 55 KNOTS.

## Attachment 2

## WEATHER ADVISORY NOTIFICATION DIAGRAM

Agency ⇒	T O W E R	T R A C O N	C. P O S T	B A S E O P S	M A C C	W A D S M C C	W A N G
Criteria ↓							
<b>McChord Forecast Advisories (issued by the Duty Forecaster).</b>							
<b>Snow Accum. &lt; 2"</b>	X	X	X	X	X	X	X
<b>McChord Observed Advisories (issued by the Duty Observer and/or Duty Forecaster) <sup>3</sup></b>							
<b>WSCONDS BLO 2000'</b>	X	X	X	X	X	X	X
<b>X-WND GTE 25 kts</b>	X	X	X	X		X	X
<b>X-WND GTE 35 kts</b>	X	X	X	X		X	X
<b>TS in the LFA</b>	X	X	X			X	X
<b>ICG GTE MDT</b>	X	X	X			X	X
<b>TURBC GTE SVR (Cat 2)</b>	X	X	X			X	X
<b>Method Used<sup>2</sup></b>	A	A	A	A	CP	4-4311	A
<b>Backup<sup>2</sup></b>	H 4-6503	206- 768- 2840	4-2635	4-5611	4-5704	4-4312	4-5222

**NOTES:**

1. Only when deployed to the Battlecab.
2. A - AMIS, H - Hotline, CP - Command Post.
3. Cancel when no longer occurring after thirty minutes, but evaluate carefully.

Agency ⇒	MACC	COMM
Criteria ↓		
<b>Phone Advisories (usually issued by the Duty Observer)<sup>1</sup></b>		
<b>Winds GTE 20 kts at KTCM</b>	X	
<b>Winds GTE 25 kts at KTCM</b>	X	
<b>Winds GTE 40 kts at KTCM</b>	X	X
<b>Winds GTE 60 kts at KTCM</b>	X	X
Phone Number	4-5704	4-3711

**NOTE** - Notification is made on actual occurrence. Cancellation occurs when no longer occurring after thirty minutes. If, after cancellation, the event occurs again, the advisory will be re-issued.

## Attachment 3

## WEATHER WARNING AND WATCH NOTIFICATIONS DIAGRAM

Agency ⇒	T O W E R	T R A C O N	C. P O S T	B A S E O P S	M A C C	W A D S M C C	W A N G	C C W S O
Criteria ↓								
<b>A - Tornadoes</b>	X	X	X	X	X	X	X	X
<b>B - 3/4" Hail</b>	X	X	X	X	X	X	X	X
<b>C - Winds GTE 50 kts</b>	X	X	X	X	X	X	X	X
<b>D - Winds 30-49 kts</b>	X	X	X	X	X	X	X	
<b>E - Freezing Precip</b>	X	X	X	X	X	X	X	X
<b>F - Snow Acc. GTE 2"</b>	X	X	X	X	X	X	X	X
<b>G - Lightning</b>	X	X	X	X	X	X	X	X
Method Used <sup>2</sup>	A	A	A	A	CP	4-4311	A	R
Backup <sup>2</sup>	H 4-6503	206-7 68- 2840	4-2635	4-5611	4-5704	4-4312	4-5222	R

**NOTES:**

1. Only when deployed to the Battlecab.
2. A - AMIS, R - Recall Roster, H - Hotline, CP - Command Post.

## Attachment 4

## COMMUNICATION OUTAGE/STATION EVACUATION DISSEMINATION PROCEDURES

	Agency	Tower	C. Post	Base Ops	TRACON	Det 1/CP	MACC
<b>AWDS OUTAGE BACKUP</b>		<b>Hotline</b>	<b>Hotline</b>	<b>4-5611</b>	<b>206-768-2840</b>	<b>Hotline</b>	<b>4-5704</b>
<b>EVACUATION BACKUP</b>		<b>5917 2635</b>				<b>2028</b>	
<b>CRITERIA</b>							
<b>(TCM) Weather Observations</b>		X	X	X	X	X	
<b>(TCM) Weather Forecasts</b>		X	X			X	
<b>(TCM) Weather Watches</b>	<b>Agency</b>	<b>Tower</b>	<b>C. Post</b>	<b>Base Ops</b>	<b>TRACON</b>	<b>Det 1/CP</b>	<b>MACC</b>
<b>CRITERIA</b>	<b>DLT</b>						
Tornadoes	<b>12-24 Hrs</b>	X	X	X	X	X*	X
Svr Tstms (≥ 50 Kts/3/4" Hail)	<b>12-24 Hrs</b>	X	X	X	X	X*	X
Heavy Snow ≥ 2" in 12 Hrs	<b>12-24 Hrs</b>	X	X	X	X	X*	X
Freezing Precipitation	<b>12-24 Hrs</b>	X	X		X	X*	X
Winds ≥ 50 Kts	<b>12-24 Hrs</b>	X	X		X	X*	X
Lightning Within five nm	<b>30 Min</b>	X	X		X	X*	X
<b>NOTE: * WHEN CP IS OPERATIONAL</b>							
<b>(TCM) Weather Warnings</b>	<b>Agency</b>	<b>Tower</b>	<b>C. Post</b>	<b>Base Ops</b>	<b>TRACON</b>	<b>Det 1/CP</b>	<b>MACC</b>
<b>CRITERIA</b>	<b>DLT</b>						
Tornadoes	<b>30 Min</b>	X	X	X	X	X*	X
3/4 Inch Hail	<b>90 Min</b>	X	X	X	X	X*	X
Winds ≥ 50 Kts	<b>120 Min</b>	X	X	X	X	X*	X

Winds $\geq$ 30 Kts but < 50 Kts	<b>60 Min</b>	X	X	X	X	X*	X
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Freezing Precipitation	<b>120 Min</b>	X	X	X	X	X*	X
Snow $\geq$ 2" in 12 Hrs or Less	<b>120 Min</b>	X	X	X	X	X*	X
Lightning Within 5 nm	<b>0 Min</b>	X	X	X	X	X*	X

**NOTE: \* WHEN CP IS OPERATIONAL**

<b>(TCM) Forecast Advisories</b>	<b>Agency</b>	<b>Tower</b>	<b>C. Post</b>	<b>Base Ops</b>	<b>TRACO</b>	<b>Det1/CP</b>	<b>MACC</b>
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<b>CRITERIA</b>	<b>DLT</b>						
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Snow < 2" Accumulation	<b>60 Min</b>	X	X	X	X	X	X
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**(TCM) Observed Advisories**  
CANCEL WHEN CONDITIONS ARE NOT MET FOR 30 MINUTES

<b>CRITERIA</b>							
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TSTMS IN LFA		X	X		X	X	
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WSCONDS BLO 2000 FEET		X	X	X	X	X	
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ICG GTE MDT		X	X		X	X	
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TURBC GTE SVR (CAT II)		X	X		X	X	
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CROSSWIND > 25 KTS		X	X	X	X	X	
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CROSSWIND > 35 KTS		X	X	X	X	X	
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<b>(TCM) Phone Advisories</b>						<b>62 CS/SCL</b>	<b>MACC</b>
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<b>CRITERIA</b>						<b>4-3711</b>	<b>4-5704</b>
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WINDS $\geq$ 20 KTS**							X
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WINDS $\geq$ 25 KTS**							X
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WINDS $\geq$ 40 KTS**						X	X
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WINDS $\geq$ 60 KTS**						X	X
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**NOTE: \*\* Notification on occurrence, cancel if non-occurrence for 30 minutes**